

COMMUNICATIONS NETWORK SPECIALIST SERIES

<u>Code No.</u>	<u>Class Title</u>	<u>Occ. Area</u>	<u>Work Area</u>	<u>Prob. Period</u>	<u>Effective Date</u>
4723(3284)	Communications Network Specialist I	02	730	6 mo.	11/15/00
4724(3284)	Communications Network Specialist II	02	730	6 mo.	11/15/00
4725(3284)	Communications Network Specialist III	02	730	6 mo.	11/15/00

Promotional Line: 307

Series Narrative

Employees in this series are technical specialists who design and develop voice and/or data communications networks. They also monitor, analyze, coordinate, maintain, and optimize the networks. Voice networks provide normal telephone services and special features (such as call forwarding, three-way calling, and call park). Data networks provide communication of data between central computer systems and remote data-input terminals or within local area networks.

Communications Network Specialists typically:

--design and document network solutions necessary for the installation and repair of communications systems and components by field personnel

--monitor, test, optimize, and prevent problems from developing in the operation of communication networks

--coordinate efforts to maintain, repair, and install circuitry and equipment in the networks, including investigating and resolving complex service breakdowns or equipment malfunctions

--develop procedures for the documentation, back-up, operation, and servicing of the networks; and

--analyze network operations.

DESCRIPTIONS OF LEVELS OF WORK

Level I: Communications Network Specialist I **4723(3284)**

Employees at this level are entry level specialists who learn network operations and perform simpler systems duties (such as data gathering, monitoring operations, or network documentation) or assist in higher level duties. They work under the direct supervision of a designated supervisor.

A Communications Network Specialist I typically –

1. assists in testing and optimizing voice and/or data circuits and trunks

2. monitors equipment and network performance data to identify potential problem areas and deficiencies
3. assists in analyzing service breakdowns or malfunctions within the networks and/or related components
4. collects technical information concerning malfunctions in telephone sets and voice/data circuits
5. may use network software to customize network facilities, diagnose network failures, analyze network performance, and manage network resources
6. learns the operation and function of a computerized voice/data network cable inventory by assisting in updating circuit information, location coordinates, and service functions
7. labels telecommunication equipment (such as voice/data circuit jacks and telephone sets) and maintains network documentation and equipment specifications
8. may provide direction to other staff (such as lower level technical, clerical, or student employees)
9. performs other related duties as assigned

Level II: Communications Network Specialist II**4724(3284)**

Employees at this level are experienced specialists who perform systems duties for the full range of communications network circuits and equipment (such as complex testing and optimization, investigation of network breakdowns and malfunctions, maintenance of network cable inventory, and monitoring network performance data). They work under general supervision of higher level communications personnel.

A Communications Network Specialist II typically –

1. tests and optimizes voice/data network circuits and trunks, utilizing highly complex circuit switching tests and procedures to determine voice/data integrity problems
2. monitors and analyzes service breakdowns and malfunctions by initiating circuit test procedures in the networks, to determine appropriate response action
3. monitors and analyzes equipment and network performance data to confirm problem areas and deficiencies, with responsibility for determining corrective procedures
4. may perform complex network customizations, analyses, and maintenance functions using appropriate software
5. maintains computerized voice/data network cable inventory by updating circuit information, location coordinates, and service functions
6. recommends network documentation procedures and equipment labeling
7. evaluates and recommends limited changes or modifications to network designs

8. coordinates new vendor equipment installations and performs acceptance testing
9. trains lower level communications personnel in voice/data network design, testing and maintenance techniques, differentiation and evaluation of line and circuit problems, and inspection documentation
10. performs other related duties as assigned

Level III: Communications Network Specialist III**4725(3284)**

Employees at this level are advanced specialists who are responsible for the overall coordination of the installation and maintenance of voice/data network circuits and related equipment for a major communications operation. They are also responsible for designing and developing new communications facilities and network systems. They work under the direction of higher level communications personnel.

A Communications Network Specialist III typically –

1. coordinates the planning of staff installation and maintenance work load requirements to ensure scheduled completion
2. reviews and determines upgrade systems standards to minimize operational deficiencies
3. designs and implements procedures for optimizing circuits and trunks for voice/data networks
4. designs and develops revised standards and practices for documenting, isolating, and correcting system faults
5. develops network system designs, additional wire circuits, and associated equipment, with responsibility for advising administrative staff regarding the effects of design changes on overall network operations and efficiency
6. designs cable requirements for new voice/data circuit installations and associated telecommunication equipment (such as conduits, raceways, and cable troughs)
7. instructs communications staff in changing technology
8. performs other related duties as assigned

MINIMUM ACCEPTABLE QUALIFICATIONS REQUIRED FOR ENTRY INTO:**Level I: Communications Network Specialist I****4723(3284)****CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER**

1. Any one or any combination of the following types of preparation that totals two academic years:
 - (a) college/vocational/technical training in communications, electronic engineering/technology, data processing/computer science, or a related technical field

- (b) technical work experience in communications, electronics, data processing/computer science, or a related technical field
- 2. In addition to the training/experience required in #1, 12 months of technical work experience in communications, electronics, data processing/computer science, or a related technical field

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

- 1. Knowledge of the operation, utilization, and design of equipment and instruments used in operating and maintaining voice and/or data circuit networks
- 2. Ability to read and follow electronic/electrical schematics and diagrams
- 3. Ability to understand and utilize network optimization, customization, and diagnostic tools

Level II: Communications Network Specialist II

4724(3284)

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

- 1. Possession of training/experience requirements listed for the Communications Network Specialist I.
- 2. Any one or any combination of the following types of additional preparation that totals two academic years:
 - (a) college training in communications, electronic/electrical engineering, computer science, or a related technical field
 - (b) technical systems experience in a communications operation and maintenance function.
- 3. One years of technical systems experience in a communications operation and maintenance function, in addition to the training/ experience required in #1 and #2.

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

- 1. Working knowledge of network optimization, customization, and diagnostic tools
- 2. Skill in using electronic and electrical testing equipment used in maintaining voice and/or data circuit networks
- 3. Ability to understand and design new cable installations for voice and/or data circuits
- 4. Ability to understand and analyze complex transmission media and trunk services

Level III: Communications Network Specialist III**4725(3284)****CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER**

1. Possession of training/experience requirements listed for the Communications Network Specialist II
2. Two years of work experience comparable to the Communications Network Specialist II

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. Thorough working knowledge of network optimization, customization, and diagnostic tools
2. Thorough working knowledge of analyzing complex transmission media and trunk services
3. Thorough working knowledge of designing new cable installations for voice and/or data circuits
4. Working knowledge of the operation and design of equipment and instruments used in communications repair and maintenance

Communications Network Specialist I	Revised
Communications Network Specialist II.....	Revised
Communications Network Specialist III.....	Revised